

26. (NEW) A method of oxidizing an inorganic species in an aqueous solution other than iron(II), the method comprising the steps of:

(i) forming an aqueous solution comprising one of drinking water, industrial waste water and an industrial process liquor;

(ii) supplying an oxidizable source of both sulphur and oxygen to the aqueous solution without use of any chelate; and

(iii) irradiating the aqueous solution, supplied with the oxidizable source of sulphur and the oxidizable source of oxygen, with UV light and oxidizing the inorganic species to reduce a toxicity of the inorganic species.

27. (NEW) The method as claimed in claim 26, wherein the oxidizable source of sulphur is selected from the group consisting of one or more of SO_3^{2-} , $\text{SO}_2(\text{g})$, aqueous SO_2 , HSO_3^- , $\text{S}_2\text{O}_3^{2-}$ and $\text{S}_4\text{O}_6^{2-}$.

28. (NEW) The method as claimed in claim 27, wherein the inorganic species is present in the aqueous solution in trace quantities.

29. (NEW) The method as claimed in claim 28, wherein the inorganic species is selected from the group consisting of one or more of arsenic manganese, cerium, selenium, cyanide, nickel, vanadium and uranium;

a wavelength of UV light is less than 300 nm;

the oxygen supplied to the aqueous solution is derived from air; and

the oxygen supplied to the solution has a partial pressure of about 0.2 atmospheres.